REMARKS/ARGUMENTS

Claims 1-4, 8-14, and 18-25 are pending in the application. No claims are added or canceled. The Applicant hereby requests further examination and reconsideration of the application in view of the following remarks.

Prior-Art Rejections and Allowable Subject Matter

In pages 2-11 of the office action, the Examiner rejected claims 20-25 under 35 U.S.C. 103(a) as unpatentable over U.S. Pat. App. Pub. No. 2003/0147352 to Ishibashi et al. in view of U.S. Pat. No. 6,904,462 to Sinha in further view of U.S. Pat. No. 6,807,653 to Saito. In pages 11-15, the Examiner rejected claims 20 and 24 under 35 U.S.C. 103(a) as unpatentable over Ishibashi in view of Sinha in further view of U.S. Pat. No. 5,933,422 to Kusano et al. In pages 15-18, the Examiner indicated that claims 1-4, 8-12, 18, and 19 are allowed.

Claims 13 and 14

The Examiner did not address claims 13 and 14 in the office action. Since claim 13 depends from allowed claim 1, and claim 14 depends from claim 13, both claims should be allowed. Thus, the Applicant respectfully requests that claims 13 and 14 be indicated as allowed.

Comments on Examiner's Statement of Reasons for Allowance

The Examiner's statement of reasons for the indication of allowable subject matter ("Statement") contains language that attempts to characterize the subject matter of claims 1, 18, and 19. The Applicant submits, however, that the language in the Statement does not accurately characterize those claims.

The section of the Statement about claim 1 characterizes Ishibashi, Sinha, and Zang as disclosing certain features such as a "system comprising: For each link of a specified set of links in the network: (1) assigning an initial cost to the link . . . (2) determining whether the link's bandwidth can be shared with a new restoration path . . . for the new primary path," "calculating the minimum-cost restoration path for the new primary path using the specified set of links, wherein the cost of the minimum-cost restoration path is based on the sum of the cost of the links of the minimum-cost restoration path," and "reducing the link's cost when it is determined that the link's bandwidth can be shared with the new restoration path." The Applicant submits that

the above language does not appear anywhere in claim 1 and that, therefore, the above language does not accurately characterize the subject matter of claim 1.

In general, to the extent that the Statement differs from the language of any of the allowed claims, the Applicant rejects any narrowing or limitations that might possibly result from such differences.

Furthermore, the Applicant does not admit that Ishibashi, Sinha, and Zang disclose the features that the Examiner asserts they disclose.

In addition, the Examiner indicates that (a) claim 1 is allowed because the prior art does not teach steps (A)(1)(iv)-(v) of claim 1, (b) claim 18 is allowed because the prior art does not teach step (B) of claim 18, and (c) claim 19 is allowed because the prior art does not teach a portion of step (B) of claim 19. The Applicant submits that the prior art of record also does not teach other features of claims 1, 18, and 19, which were not cited in the Statement.

For the above reasons, the Applicant objects to the Statement.

Claim 20

In rejecting claim 20, the Examiner argues that each of the combinations of (a) Ishibashi, Sinha, and Saito and (b) Ishibashi, Sinha, and Kusano discloses all of the features of claim 20. In particular, the Examiner argues that each combination teaches the feature of "for each link of a specified set of links in the network: (1) assigning an initial cost to the link . . . and (3) reducing the link's cost when it is determined that the link's bandwidth can be shared with the new restoration path."

Saito

The Examiner asserts that it would have been obvious to combine Ishibashi, Sinha, and Saito "in order to cost of routing information at economy of scale." The Applicant presumes the Examiner meant " . . . to reduce the cost of . . . ." Notably, the Examiner provides no indication of how reducing an assigned initial link cost, where the link cost is used for calculating a restoration path, reduces the "cost of routing information." Applicant submits, therefore, that the combination of Ishibashi, Sinha, and Saito is improper.

Assuming, *arguendo*, that the combination of Ishibashi, Sinha, and Saito is proper, which the Applicant does not admit, then the Applicant submits that the combination does not teach the above-quoted requisite feature of claim 20.

The Examiner cites claim 6 of Saito as specifically teaching "reducing the link's cost when it is determined that the link's bandwidth can be shared with the new restoration path." As an initial matter, the Applicant respectfully submits that the Examiner's quote from claim 6 is presented misleadingly out of context. The Examiner asserts that Saito teaches "minimization of the link cost . . . where a primary path and a recovery path share their necessary resources." The two parts of the quote are, however, unrelated in the full, un-redacted text. Claim 6 of Saito adds limitations to two elements of claim 1 and provides that:

> "the optimization reference generating means sets an objective function to minimize a link metric and a path metric in addition to the minimization of the link cost; and
>
> the link capacity calculating condition generating means generates a constraint expression to calculate, with respect to each state, a link capacity in the case where a primary path and a recovery path share their necessary resource" (emphasis added).

As can be seen, the two underlined sections are not related to each other. Thus, it cannot be said that the cited section of Saito teaches the above-referenced requisite feature of claim 20 of the present invention.

Furthermore, Saito does not anywhere teach reducing a link's cost, let alone reducing a link's cost when it is determined that the link's bandwidth can be shared with the new restoration path. Saito might teach a method for minimizing a link cost – *i.e.*, obtaining a minimum link cost, but Saito does not teach a method for reducing a link's cost, from an assigned initial cost, when it is determined that the link's bandwidth can be shared by the new restoration path, as required by claim 20. Thus, it cannot be said that Saito teaches this requisite element of claim 20.

Kusano

The Examiner asserts that it would have been obvious to combine Ishibashi, Sinha, and Kusano "in order to cost of routing information at economy of scale" and because "the combined system have guaranteed the required bandwidth for the pre-established connection." The Applicant presumes the Examiner meant " . . . to reduce the cost of . . . ." Notably, the Examiner

provides no indication of how reducing an assigned initial link cost, where the link cost is used for calculating a restoration path, reduces the "cost of routing information" or guarantees "required bandwidth for the pre-established connection." Applicant submits, therefore, that the combination of Ishibashi, Sinha, and Kusano is improper.

Assuming, *arguendo*, that the combination of Ishibashi, Sinha, and Kusano is proper, which the Applicant does not admit, then the Applicant submits that the combined references do not teach the above-quoted requisite feature of claim 20. The Examiner cites col. 7, lines 56-58, and col. 8, lines 47-49, of Kusano as specifically teaching "reducing the link's cost when it is determined that the link's bandwidth can be shared with the new restoration path." The cited sections both disclose "calculating an assignable bandwidth of one of said links by reducing the bandwidth of an existing virtual path sharing said one link with said alternate virtual path if the priority class of the failed virtual path is higher than the priority class of the existing virtual path . . . ."

Notwithstanding the foregoing, it is important to note that reducing the bandwidth of a path based on relative priority classes is not reducing a link's cost when it is determined that the link's bandwidth can be shared with a new restoration path, as required by claim 20. Furthermore, the term "cost" does not even appear anywhere in Kusano. Thus, it cannot be said that the Kusano teaches this requisite element of claim 20.

Therefore, Applicant submits that claim 20 is allowable over the cited references. For similar reasons, applicant submits that claim 24 is also allowable over the cited references. Since claims 21-23 depend variously from claim 20, and claim 25 depends from claim 24, it is further submitted that those claims are also allowable over the cited references.

Claim 23

In rejecting claim 23, the Examiner argues that the combination of Ishibashi and Sinha teach all of the claimed features of claim 23. In particular, the Examiner argues that Sinha teaches a method wherein (1) "a path pair cost is generated for each candidate primary path as the sum of the path cost of the candidate primary path and the path cost of the corresponding minimum-cost restoration path," and the method further comprises (2) "selecting (i) a candidate primary path from the set of candidate primary paths and (ii) the corresponding minimum-cost

restoration path that together have the lowest path pair cost." The Applicant submits, however, that Sinha does not teach these requisite features of claim 23.

Feature 1

In support of his argument, the Examiner cites the Abstract of Sinha, which discloses a system where a "path cost is determined for at least two protection paths based on a sum of link costs associated with a respective protection path." On its face, the path cost calculation taught by Sinha is different from the path cost calculation of claim 23. Sinha teaches calculating the path cost for each protection path by summing the link costs associated with the respective protection path. Claim 23, on the other hand, recites generating a path cost for each candidate primary path as the sum of (a) the path cost of that very same candidate primary path and (b) the path cost of the corresponding minimum-cost restoration path. Sinha does not teach adding the path cost of a primary path to the path cost of a corresponding protection path to generate a path pair cost. Thus, it cannot be said that Sinha teaches this requisite feature of claim 23.

Feature 2

In support of his argument, the Examiner cites the Abstract of Sinha, which discloses a system where "One of the at least two protection paths having the minimum path cost is selected to provide protection for the working path." The selection disclosed in Sinha is of the protection path that has the minimum path cost. However, the selection recited in claim 23, as the very language presented by the Examiner on page 9 of the office action makes clear, is of a candidate primary path that, together with a corresponding restoration path, has the lowest path pair cost. Sinha does not teach path pair costs, let alone the selection of a primary path based on the associated path pair cost. Thus, it cannot be said that Sinha teaches this requisite feature of claim 23.

Therefore, for the foregoing reasons, the Applicant submits that claim 23 is allowable over the cited references.

In view of the above amendments and remarks, Applicants believe that the now-pending claims are in condition for allowance. Therefore, Applicants believe that the entire application is now in condition for allowance, and early and favorable action is respectfully solicited.

Fees

During the pendency of this application, the Commissioner for Patents is hereby authorized to charge payment of any filing fees for presentation of extra claims under 37 CFR 1.16 and any patent application processing fees under 37 CFR 1.17 or credit any overpayment to Mendelsohn & Associates, P.C. Deposit Account No. 50-0782.

The Commissioner for Patents is hereby authorized to treat any concurrent or future reply, requiring a petition for extension of time under 37 CFR § 1.136 for its timely submission, as incorporating a petition for extension of time for the appropriate length of time if not submitted with the reply.

Respectfully submitted,

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